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I hereby certify that this paper and every paper referred to therein as being enclosed is being filed with the USPTO via facsimile to the designated fax number (571) 273-8300 or via EFS-Web and addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450,on the date below

Date: August 21, 2008

By Jennifer Archer

Attorney Docket No. 100716-59
Confirmation No. 5370

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| APPLICANT | : | HELMUT BONNEMANN ET AL. |
| SERIAL NO. | : | 10/518,703 |
| CUSTOMER NO. | : | 27384 |
| FILED | : | December 20, 2004 |
| FOR | : | MONODISPERSIBLE MAGNETIC NANOCOLLOIDS HAVING AN ADJUSTABLE SIZE AND METHOD FOR THE PRODUCTION THEREOF |
| ART UNIT | : | 1793 |
| EXAMINER | : | Jie Yang |

August 21, 2008

**Mail Stop AF**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

SIR:

Applicant respectfully requests pre-appeal brief review of the final rejection mailed on February 21, 2008, specifically, the three obviousness rejections based primarily on Sun et al. ("Sun 'S287"), Science, 28: 1989 (2000), in view of Bonnemann et al. ("Bonnemann '377"), US 5,308,377, alone or in combination with other art.

Applicant respectfully submits that the Examiner has committed the following errors:

**1. The Examiner misconstrues Bonnemann '377.**

In the middle of page 5 of the final rejection, the Examiner writes:

> "US'304 (sic) teaches choosing organometallic compound of a metal of group 13 to recover the metal or alloy powder in the pure state with particular advantage by way of a simple filtration from the clear organic solution (col. 2, line 37 to col. 3, line 11), which gives a good motivation to apply US'304's (sic) technique in the process of 'S287."

The references to "US'304" are believed to be clear typographical errors; clearly US'377 was intended.

Bonnemann '377 relates to a process for preparing a finely divided microcrystalline-to-amorphous metal and/or alloy powders or highly dispersed colloids. See, column 1, lines 9-15. The process involves reduction of metal salts with alkaline metal hydroxides in organic solvents. Id.

The reducing agents for such reduction are described by Bonnemann '377 as being "metal hydrides of the first or second main groups of the Periodic Table * * * by means of organoboron and/or organogallium complexing agents." See, column 1, lines 51-55.

The Examiner considers the organoboron and/or organogallium compounds to meet the terms of the instant claims requiring "an organometallic compound of a metal of Group 13." Applicants agree that boron and gallium are elements of Group 13 of the Periodic Table.

Bonnemann '377 gives a more detailed description of the reducing agents at column 2, lines 6-36, particularly lines 17-23. Specifically, Bonnemann '377 teaches "[a]s the reducing agents there are used metal hydrides of the general formula $M_x$ * * * which have been reacted with a complexing agent having a general formula [various boron or gallium formulas are provided]." Further, Bonnemann '377 clearly teaches at column 2, lines 30 ff, that "[t]he reaction of the metal hydrides with complexing agents [is] for the purpose of solvation in organic solvents * * *."

Bonnemann '377 then teaches in the paragraph beginning at column 2, lines 37 ff, that during the reduction of the metal salts, the complexed metal hydrides are converted into salts, while the metal is released from the metal salt to be recovered as a precipitate by filtration.

It is clear that the value of the organoboron or organogallium compounds lies in its ability to complex with the metal hydride to form a metal hydride:organoboron or organogallium complex. The metal hydride:organoboron or organogallium complex, when reacted with a metal salt, will form complex salts that remain in solution and solid metal or alloy that will precipitate out of solution. The precipitated metal or alloy can be recovered by filtration.

Bonnemann '377 hints of no value of the organoboron or organogallium compounds outside of this context and, therefore, the Examiner misconstrues Bonnemann '377 in finding or suggesting that the ability to precipitate metal lies in the organoboron or organogallium compounds in and of itself. Applicants respectfully submit Bonnemann '377 teaches no value of the organoboron or organogallium compound apart from its use as a complexing agent with metal hydrides as a reducing agent complex for metal salts.

**2. The Examiner fails to provide any evidence or rationale supporting the use of the teachings of Bonnemann '377 in the context of Sun 'S287.**

The Examiner concedes towards the top of page 3 of the Office Action dated August 31, 2007, that "'S287 does not explicitly states: '...in the presence of an organometallic compound of a metal of group 13.'"

Further, the Examiner does not deny that Sun 'S287 does ***not*** make use of metal hydrides in his process.

Since Bonnemann '377 teaches the use of the organoboron and/or organogallium compound to form a complex with metal hydrides and since Sun 'S287 does not use metal hydrides, Applicants respectfully submit that the record is devoid of any evidence or any good reason why a person having ordinary skill in the art should be motivated to use organoboron and/or organogallium compounds in the process of Sun 'S287.

Absent such evidence or good reason, Applicants respectfully submit that the Examiner has failed to make out a *prima facie* case of obviousness.

**3. The Examiner does not properly consider the data in the instant specification.**

Applicants refer to the discussion in the last paragraph on page 8 and the first paragraph on page 9 of the amendment filed on November 30, 2007. Here, Applicants explain the surprising and unexpected results demonstrated in the instant specification, namely the ability to use the concentration of the organometallic compound to control particle size distribution.

Towards the bottom of page 5 of the final rejection, the Examiner finds:

> "'S287 teaches the FePt particle size is tunable from 3-10 nanometer diameter with a standard deviation of less than 5% (Abstract of 'S287), which are within the claimed ranges."

However, as noted above, the Examiner has already conceded that Sun 'S287 does not teach the use of an organometallic compound of Group 13, as required by the instant claims. Consequently, whatever effect the Examiner is referring to as being taught by Sun 'S287 cannot be due to the presence of an organometallic compound of Group 13 since none is present. There is, in short, still nothing in the cited combination of references that suggests that the size distribution can be controlled by including an organometallic compound of Group 13. The Examiner does not deny that the secondary references are silent on this benefit. Accordingly, the data in the specification are evidence of an unexpected result, which proves nonobviousness.

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the final rejections and allowance of claims 1-18.

Early and favorable action is earnestly solicited.

Respectfully submitted,

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